BELOUSOV, L. V. Cand Biol Sci -- "Cellular processes in the morphogenesis of hydrozoan polyps." Mos, 1961 (Acad Sci USSR. Inst of Morphology of Animals im A. N. Severtsev). (KL, 4-61, 191)

BELOUSOV, L.V.

Cell proliferation and growth of hydroid polypi. Zhur. ob. biol. 22 no.4:281-291 Jl-Ag '61. (MIRA 15:6)

1. Department of Embryology, State University of Moscow.
(COELENTERATA)

BELOUSOV, L.V.

Intra-vitam observations on cell migration in the hydroid polyp Obelia flexuosa. Dokl. AN SSSR 136 no.6:1490-1493 F '61. (MIRA 14:3)

1. Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova. Predstavleno akademikom A. N. Bakulevym.

(HYDROMEDUSAE)
(CELLS)
(REGENERATION (BIOLOGY))

IOFF, Nikolay Abramovich[deceased]; BELOUSOV, L.V., red.; KAPYSHEVA, V.S., red.; VORONINA, R.K., tekhn. red.

[A course in the embryology of invertebrates]Kurs embriologii bespozvonochnykh. Pod red. L.V.Belousova. Moskva, Gos.izd-vo "Vysshaia shkola," 1962. 265 p. (MIRA 16:3)
(Embryology--Invertebrates)

BELOUSOV, L.V.; VSEVOLODOV, E.B.; GOLICHENKOV, V.A. (Moskva)

Development of slime fungi and some problems of experimental embryology. Usp.sovr.biol. 55 no.1:109-117 Ja-F '63. (MIRA 16:3)

(MYXOMYCETES) (EMBRYOLOGY, EXPERIMENTAL)

BELOUSOV, L.V.

Formation of excessive interstitial cells as an indicator of the indefinite intensity of cellular multiplication in the morphogenesis of Campanularia integra and Campanulina lacerata. Dokl. AN SSSR 150 no.3:690-693 My '63. (MIRA 16:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova. Predstavleno akademikom Yu.A. Orlovym.
(Coelenterata) (Cell division(Biology))

GIBADULIN, R.A.; BELOUSOV, L.V.; SHABADASH, A.L.; YEPIFANOVA, O.I.; CHERIVOVA, I.A.; ZALETAYEVA, T.A.; TIKHOMIROV, V.N.

Brief news. Biul. MOIP. Otd. biol. 69 no.1:145-156 Ja-F '64. (MIRA 17:4)

BELIAUSOV, L.V.

Changes in the growth direction of embryonic rudiments as a result of their interaction. Dokl. AN SSSR 160 no.2:475-478 Ja '65. (MIRA 18:1)

1. Moskovskiy gosudarstvennyy universitet. Submitted April 17, 1964.

BELOUSOV, M., kand. tekhn. nauk.

Preface. Sbor. trud. Akad. zhel. transp. no.1:3-6 '52. (MIRA 11:3)

1. Nachal'nik Akademii zheleznodorozhnogo transporta Ministerstva putey soobshcheniya general-direktor tyagi 2-go ranga.
(Railroads--Management)

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing. M

Abs Jour : Ref Zhur Biol., No 12, 1958, 53702

Author : Belousov, M., Madraimov, I.
Inst :
Title : The Role of Potassium Fertilizers in Raising the Yield and the Quality of Cotton Wool.

Orig Pub : Khlopkovodstvo, 1957, No 4, 28-33

Abstract : This article cites the results of the field and laboratory studies conducted in 1940-1945 and 1954-1955 at the Ak-Kavak Station of the All-Union Cotton Scientific Research Institute. The studies showed the high effectiveness of potassium fertilizers together with a systematic application of increased rates of nitrogen and phosphorus fertilizers on long-irrigated sierozems. Application of K 50-100 gives a crop increase of 3-6 cwt/ha. Deficiency of K in the soils produces a disturbance in the carbohycrate metabolism in the plants, expecially

Card 1/2

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing. M

Abs Jour : Ref Zhur Biol., No 12, 1958, 53702

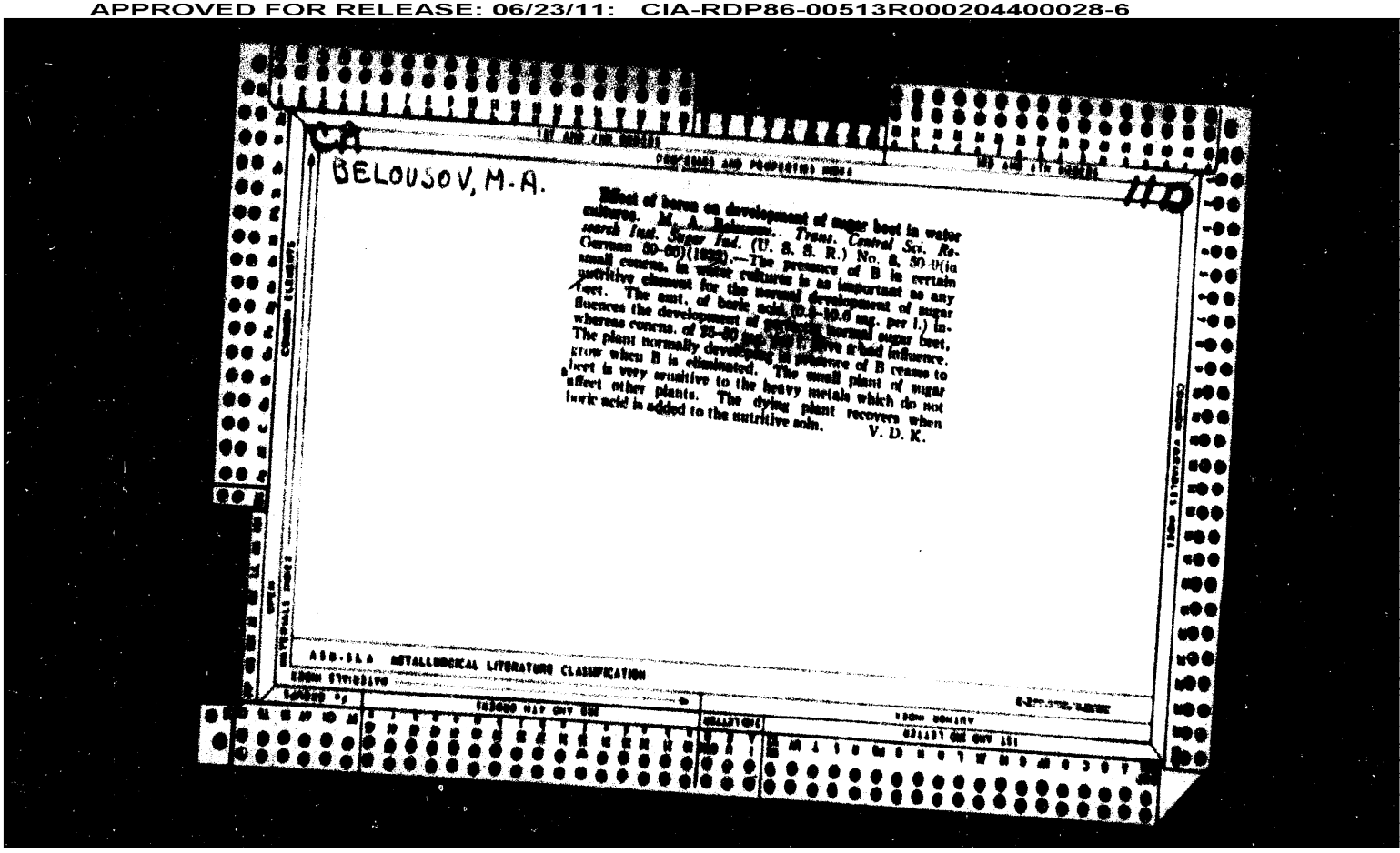
during the period of mass blossoming and at the start of fruit formation. Along with this, a deterioration in the technical qualities of the fibers takes place. (The weight of 1000 seeds decreases by 30-40%). -- A.M. Smirnov

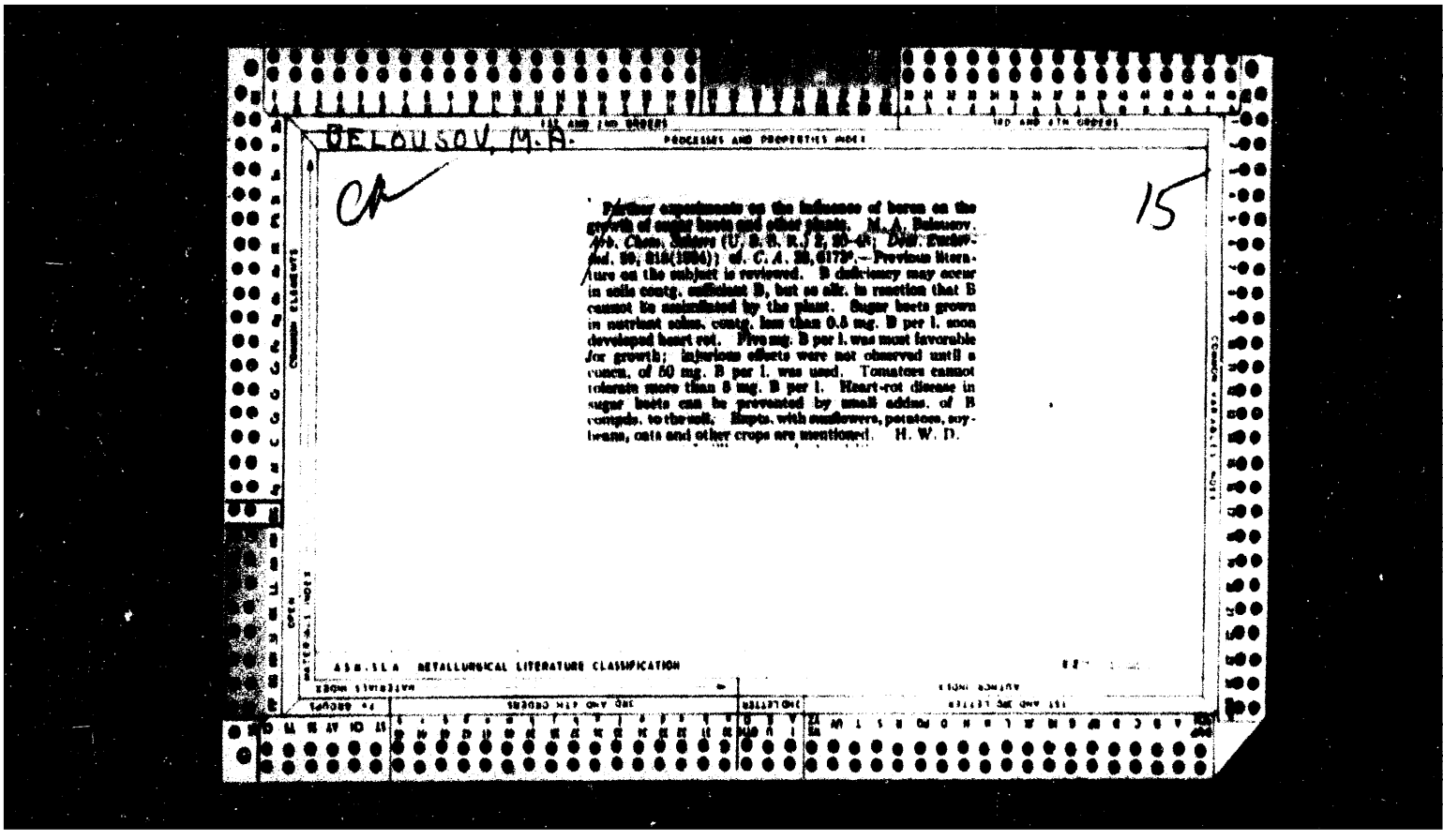
Card 2/2

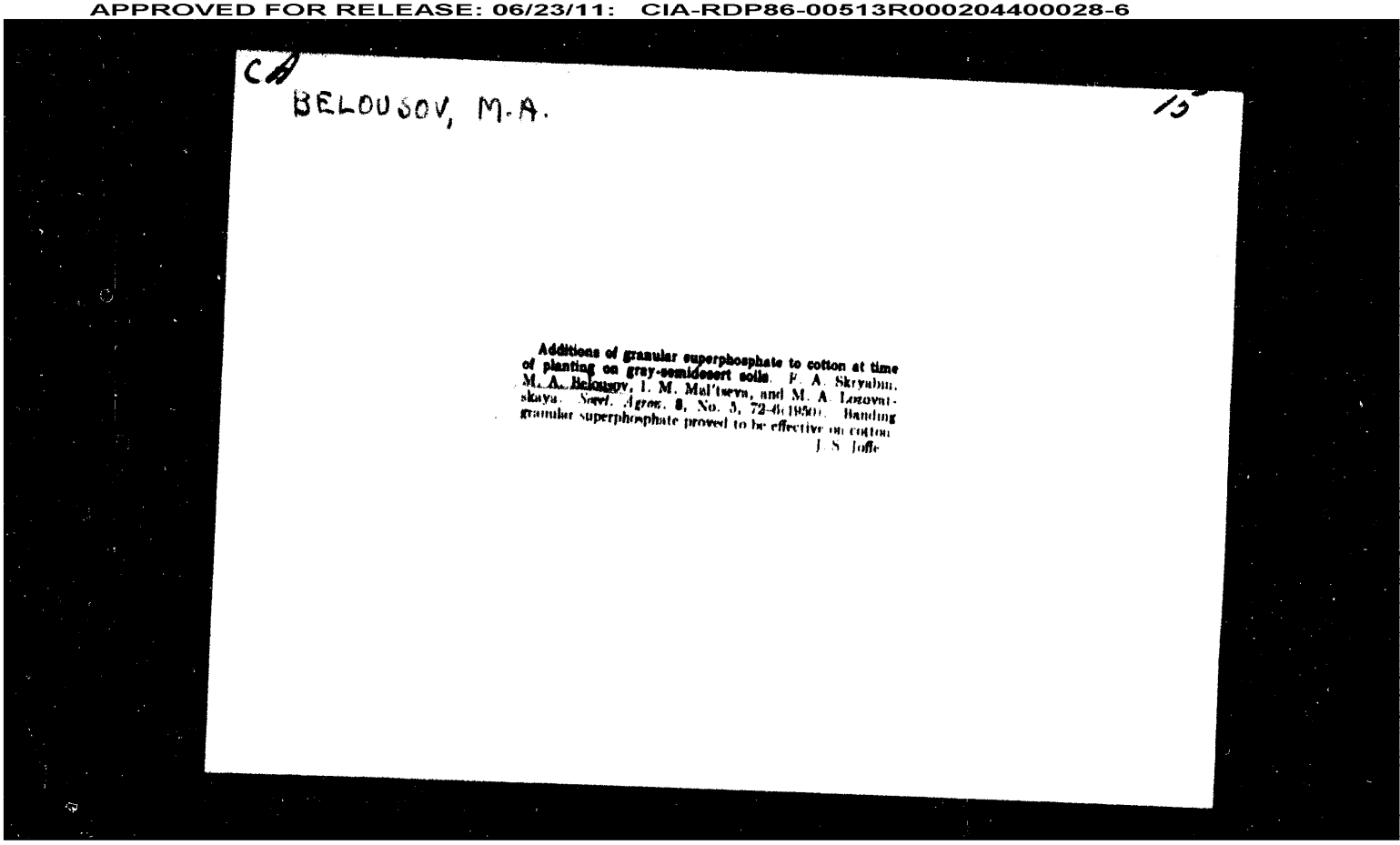
PICHUGIN, A.A., dotsent, kand.tekhn.nauk; BOCHAROV, Ye.V., inzh.. Prinimali uchastiye: KUZ'MINSKIY, A.G., inzh.; VORONKINA, M.A., inzh.; FEDOROV, A.A., inzh.;BELOUSOV, M.A., inzh.ekonomist; PROSVIRNIN, G.V., inzh.; KNIGINA, G.I., dotsent, kand.tekhn.nauk; LESNIKOV, V.V., dotsent, kand.tekhn.nauk; SIDOROV, A.K., dotsent, kand. arkhitektury; KARTASHOV, A.A., arkhitektor; BARITSKIY, F.F., dotsent, kand.tekhn.nauk; KULISHOV, D.A., prof.; ZDESENKO, G.M., kand.tekhn. nauk; ALEKSANDRENKO, A.I., dotsent, kand.tekhn.nauk; STREL'NIKOV, G.Ye., kand.tekhn.nauk; VANNYMV, V.A., assistent; CHEREPKO, P.A., dotsent. SUSHINSKIKH, A.F., inzh., retsenzent; MEN'SHIKOV, P.N., red.; SUBBOTINA, G.M., tekhn.red.

[Manual for rural builders] Spravochnik proizvoditelia rabot sel'skokhoziaistvennogo stroitel'stva. Novosibirsk, Novosibirskoe knizhnoe izd-vo. Vol.1. 1959. 673 p. Vol.2. 1959. 677-1191 p. (MIRA 13:2)

(Farm buildings)







CA

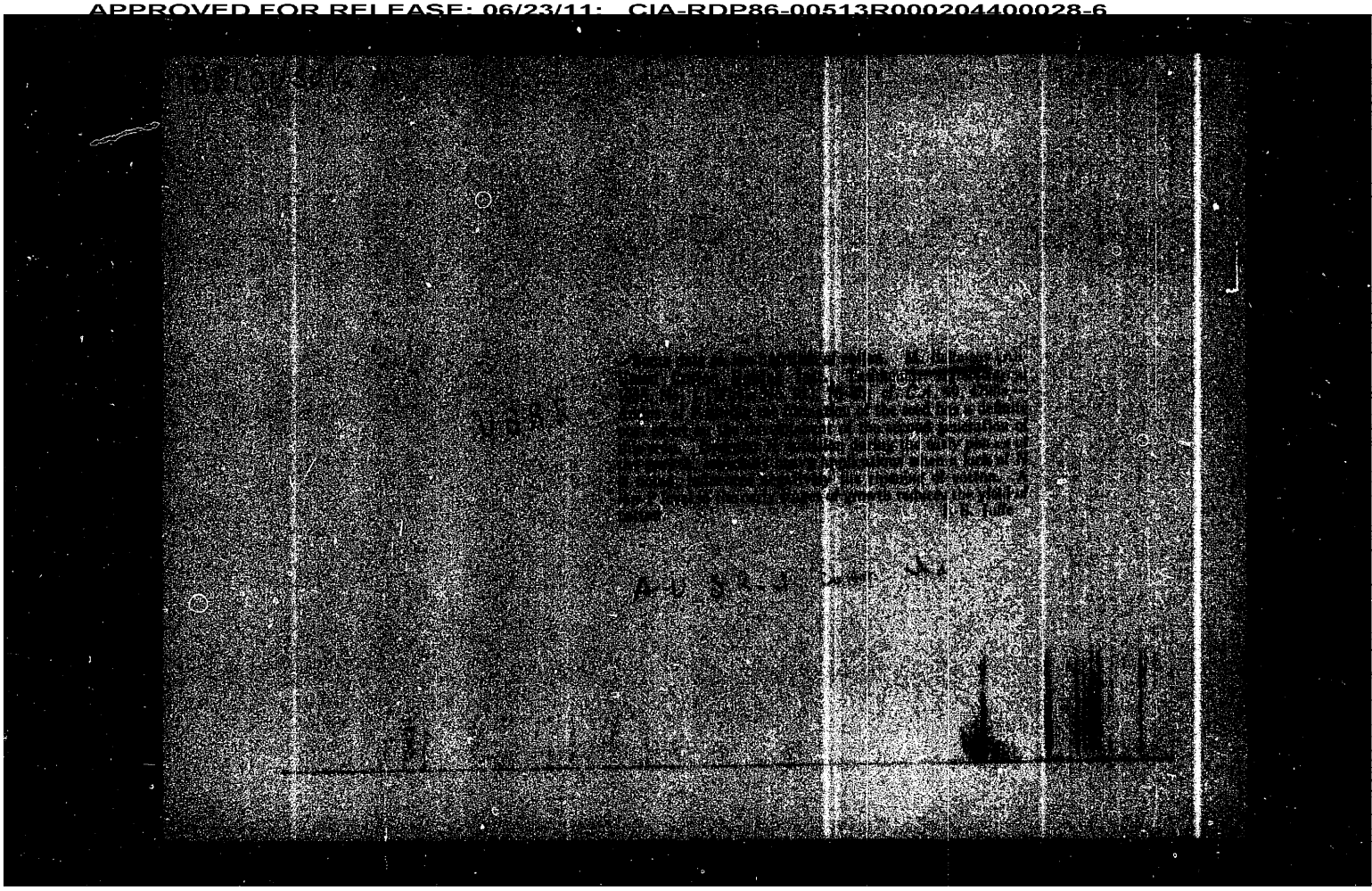
BELOUSOV, M.A.

13

Additions of granular superphosphate to cotton at time of planting on gray-semidesert soils. F. A. Skryabin, M. A. Belousov, I. M. Mal'tseva, and M. A. Lozovatskaya. *Sovet. Agron.* 8, No. 5, 72-6 (1950). Banding granular superphosphate proved to be effective on cotton.

J. S. Joffe

ILLEGIBLE



ABRAMOV,A.; BELOUSOV, M.

A rescue squad in action. Voen. znan. 40 no.12:20-21 D '62
(MIRA 18:1)

COUNTRY : USSR
CATEGORY : Cultivated Plants. Industrial, Oleiferous, Sugar. M

ABS. JOUR. : RZhBiol., No.23 1958, No. 104758

AUTHOR : Belousov, M. A.
INST. : Scientific Research Cotton Institute
TITLE : The Problem of Root Nutrition in Cotton Plant.

ORIG. PUB. : V. sb.: Materialy Ob"edin. nauch. sessii po khlopkovodstvu. T. I. Tashkent, Gosizdat UzSSR, 1958, 348-355

ABSTRACT : On the basis of data of vegetation experiments in sand cultures, conducted at Ak-Kavak Central Agrotechnical Station of Scientific Research Cotton Institute, it was determined that the uptake of P^{32} from the outer medium and incorporation in the metabolism, begins immediately after the beginning of the fermentative processes during the swelling of the seeds, in connection with this, phosphorus fertilizers should be applied into the soil as close to the location of the seeds as possible. The most effective action of N develops at the time of the formation in the sprouts of the first pair of true leaflets.

Card: 1/3

COUNTRY :
CATEGORY : M

ABS. JOUR. : RZhBiol., No. 1958, No. 104738

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : Increase in the concentration of N and the maintenance of it at a high level until the time of budding, contributes a great deal to the growth processes and reduces the period of blossoming. With an insufficiency of K in the period of fruit formation, the normal carbohydrate metabolism is disturbed. The proportion of nutrient elements and their concentration in the medium produce a considerable influence on the water consumption of the cotton plant. With the increase in the concentration of all substances or even of only the phosphates, the expend-

Card: 2/3

COUNTRY :
CATEGORY : M

ABS. JOUR. : RZhBiol., No. 195 8, No. 104758

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : iture of water for the production of a unit of crop is reduced by 20-50%. The amounts of individual substances and the periods of their application have a substantial influence on the quality of cotton wool. Early supplementary dressings with N with a good supply of K, considerably increase the oil content of the seeds. Nutrient elements have an appreciable influence on the inherent properties of the seeds by changing their quality. These effects become fixed and are transmitted to the succeeding generations. -- A. M. Smirnov

Card: 3/3

BELOUSOV, M.A., red.; POPOV, G.P., red.; DORMAN, I.A., red.[deceased]; KENZER, A.P., red.; SOROKINA, Z.I., tekhn. red.

[Methods for field and pot experiments eith cotton under conditions of irrigation farming] Metodika polevykh i vegetatsionnykh opytov s khlopchatnikom v usloviiakh orosheniia. Izd.2., dop. Pod obshchei red. M.A.Belousova, G.P.Popova i I.A.Dormana. Tashkent, M-vo sel'.khoz.UzSSR, 1961. 149 p. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khlopkovodstva.

(Soviet Central Asia--Cotton growing)
(Agriculture--Experimentation)

BELOUSOV, M.A., otv. red.; PROTASOV, P.V., red.; BESEDIN, P.N., red.; KENZER, A.P., red.; ARUTYUNOV, V.N., tekhn.red.

[Methods of agrochemical, agrophysical, and microbiological studies in irrigated cotton areas] Metody agrokhimicheskikh, agrofizicheskikh i mikrobiologicheskikh issledovanii v polivnykh khlopkovykh raionakh. 3., perer. i dop. izd. Tashkent, 1963. 439 p. (MIRA 17:3)

1. Tashkent. Vsesoyuznyy nauchno-issledovatel'skiy institut khlopkovodstva.

BELOUSOV, M.A.; MIRRAKHIMOVA, M.

Investigation of the behavior and translocation of phosphorus during the flowering and fruit-forming stages of cotton. Uzb. biol. zhur. no.5:62-68 '61. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut khlopkovodstva.

BELOUSOV, Mikhail Aleksandrovich; GORELIK, T.M., red.

[Physiological bases of the root nutrition of cotton] Fiziologicheskie osnovy kornevogo pitaniia khlopchatnika. Tashkent, Izd-vo "Uzbekistan," 1964. 200 p. (MIRA 18:3)

BELOUSOV, M.F.

Treatment of dermatoses with polymerized oils. Sovet.med. No.2:25-27 Feb 51. (CLML 20:6)

1. Khar'kov.

BELOUSOV, M.F.

Method of polymerization of oils. Sovet. med. no.10:37 Oct 1951.
(CIML 21:1)

1. Khar'kov.

BELOUSOV, M.F., kand.med.nauk

Recovery of a slowly healing wound surface after traumatic avulsion of the scalp. Vrach.delo no.2:181 F '59.
(MIRA 12:6)

1. Khar'kovskiy oblastnoy venerologicheskiy dispanser.
(SCALP--WOUNDS AND INJURIES)

SOBOLEV, N.N.; BELOUSOV, M.M.; RODIN, G.M.; SVIRIDOV, A.G.; SKOROBOGATOV, N.G.; FAYZULLOV, F.S.

Temperature of the flame of a liquid-propellant rocket engine. Part 1. Zhur.tekh.fiz. 29 no.1:27-36 Ja '59. (MIRA 12:4)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR, Moskva.
(Rockets (Aeronautics)) (Flame) (Temperature--Measurement)

ATABEKOV, G.I.; BELOUSOV, M.M.; BULGAKOV, K.V.; VASIL'YEV, D.V.; YEGIZAROV, I.V.; ZAKHAROV, S.N.; ZEYLIDZON, Ye.D.; KOSTENKO, M.P.; MANOYLOV, V.Ye.; NARNEVSKIY, B.I.; RYZHOV, P.I.; SOLOV'YEV, I.I.; SYROMYATNIKOV, I.A.; FABRIKANT, V.L.; CHERNIN, A.B.; CHERNOBROVOV, N.V.; FEDOSEYEV, A.M.; SHABADASH, B.I.; SHCHEDRIN, N.N.; FATEYEV, A.V.

Viktor Ivanovich Ivanov, 1900-1964; an obituary. Elektrichestvo no.11:89 N '64. (MIRA 18:2)

BELOUSOV, M.M.

Dec 1947

USSR/Electricity
Power Plants, Electric

"Comments on L.I. Dvoskin's Article, 'Switching Systems and Construction of Substations of 110-kw Capacity with Bypassing Circuit Breakers'," G.A. Kireyev, M.M. Belousov, A.I. Nazarov, V.N. Gurevich, Engineers, Etc., 2 pp

"Elektricheskiye Stantsii" No 12

Presents views, comments, and suggestions by several engineers on Dvoskin's article that appeared in "Elektricheskiye Stantsii" No 1

PA 50T17

BELOUSOV, M. M.

Review of V. V. Ivashev's book "Repair of transformers," Rab. energ. 2, No. 9, 1952.

1. BELOUSOV, M. M.

2. USSR (600)

4. Kondakhchan, V.S.

7. "Manual for the electric power plant electrician on duty."
V. S. Kondakhchan. Reviewed by M. M. Belousov. Rab.energ. 2 No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

BELOUSOV, M. M.

Dissertation: "Investigation of the Mechanical Characteristics of Steel-Aluminum Wires and the Calculation of Wires by Their Real Characteristics." Cand Tech Sci, Leningrad Electrical Engineering Inst, Leningrad, 1953. Referativnyy Zhurnal--Mekhanika, Moscow, Jul 54.

SO: SUM No. 356, 25 Jan 1955

BELOUSOV, M. N. Eng., BASKAKO , G. N. Eng., SIROTA, I. M. Eng., ROZOVSKIY, YU. A. Eng.

Electric Lines

Problem of four-wire and six-wire electric transmission lines. Elektrichestvo No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

BELOUSOV, M.M.

Calculation of steel-aluminium condustors from their actual characteristics. Elektrichestvo '53, No.4, 7-13. (EEA 56 no.672:4775 '53) (MLRA 6:4)

Research done at TsNIEL on steel, aluminum, and steel-aluminum conductors showed that actual behavior of steel-alu[illegible] differs from that now assumed for calc[illegible]. [illegible] Rules for Construction of Electr[illegible] [illegible]

BELOUSOV, M. M.

Electrical Engineering Abstracts
May 1954
Transformers

1920. Increase of the theoretical span lengths of transmission lines. M. M. Belousov. *Elektrichestvo*, **1953**, *No.* 9, 9–11. *In Russian.*

Author points out further advantages of his method of calculating steel-aluminium conductors from their actual characteristics [cf. Abstr. 4775 (1953)], gives examples of possible economies by this method, to which belongs an increase of the theoretical span lengths without altering the height of the supporting structures. The reliability of the operation of such lines with increased spans and the prevention of dangerous vibratory wear stresses when the static tensile stressing of the conductor materials is increased according to the method, are also considered.

B. F. KRAUS

ILLEGIBLE

Belousov, M.M.

BELOUSOV, M.M.

Operation of protectors and fuse links of one voltage in a circuit of a different voltage. Energetik 5 no.9:39 S '57. (MIRA 10:10)

(Lightning protection)

BELOUSOV, M. M.

AUTHORS: 1) Marinov, A. M., Engineer, Myzin, L. M. 105-58-6-26/33
Engineer, Pokrovskiy, A. F., Engineer
2) Belousov, M. M., Candidate of Technical Sciences

TITLE: The Underlying Principles of the Uniform Power System of the European Part of the USSR (Osnovy yedinoy energeticheskoy sistemy yevropeyskoy chasti SSSR)

PERIODICAL: Elektrichestvo, 1958, Nr 6, pp. 88 - 91 (USSR)

ABSTRACT: This is a comment on the article by V. I. Veyts in Elektrichestvo, 1957, Nr 1; 1) In the elaboration of a uniform power system its scheme must not be projected starting only and mainly from large power plants. In spite of the gigantic dimensions in the construction of the hydroelectric power plants their specific share in the power economy at the end of the sixth five-year-plan will only amount to 18%. At present thermal power plants with 1 to 1,5 million kW are built in the east, at the Ural and in the south. At first the question has to be answered: what can more conveniently be conveyed - fuel or electric energy? Coal with an ash content of 40% has recently be conveyed from the Ekibastuz- basin(75°30' east longitude 51°40' north latitude) to the Ural. Large thermal power plants

Card 1/4

should be constructed in the Ekibastuz basin and electric energy should mainly be conveyed to the Ural. Open-work mining was begun in the coal basin of Kushmurun (64°30' east longitude, 52°30' north latitude) of the Kustanay region. The brown coal of this deposit also has a high ash content. New electric power plants which are supplied with this coal are built at the Ural. At the same time electric power plants with 1,2 to 2,4 million kW are projected in the Kustanay region. It had to be determined what can more advantageously be conveyed from Kushmurun to the Ural: coal or electric power. The transfer of electric energy from Siberia to the Ural and farther to the west of the country must not only be brought into accordance with the hydroelectric power plants but also with the working of the large coal deposits in the Asiatic part of the country and with the construction of large thermal power plants. A principal scheme for the connection between Ural and Siberia is given here. According to this scheme two large longitudinal connections in the direction of Omsk-Tyumen'-Sverdlovsk and Omsk-Petropavlovsk-Chelyabinsk should be established. Along the main railroad lines a 110 kV distribution network consisting of two-circuit lines of intermediate and cen-

tral substations with 110 kV is to be set up. For increasing the transmitting power of the 110 kV lines the possibility of changing them to a 154 kV voltage (where necessary) is to be investigated. - At present distributing networks with 110 kV are built in the section of Novosibirsk-Omsk-Kurgan-Chelyabinsk. The disregard of the development of 6 kV, 35 kV and 110 kV networks led to the fact that a large number of small uneconomic plants exist beside large electric power plants and that a considerable number of inhabited places is without power supply. These consume much fuel and need much personnel. An immediate solution of the problem concerning the construction of the hydroelectric power plant at the lower Ob' and the strengthening of the hydroelectric power plants at the Kama is demanded. The works by the Gidroproyekt show that it would be possible to establish a hydroelectric power plant with several million kV at the lower Ob' in the Region of Salekhard (town at the polar circle, on the Ob'). For the next 10 years the Kama and its water basin will represent the main source of the power system of the Ural. The work of the hydroelectric power plants Votkinskaya and Nizhne Kamskaya have recently been check-

The Underlying Principles of the Uniform Power System of the European Part of the USSR 105-58-6-26/33

ed. 2) The first and most important task consists in the connection of the small and average power systems with the large ones and in the establishment of the 110 and 35 kV networks for supplying all places and industries by the large power systems. The opinion that the problems on the construction of inter-system lines with 400 kV can be dealt with independently of the problems of the development of 110-220 kV networks is wrong. The only reasonable basis for projecting a uniform high-voltage network is a joint plan for the development of the power systems, the 110 - 220 kV networks and the 400 - 500 kV networks. There is 1 figure.

1. Industry--USSR 2. Water power--USSR 3. Electric power production--USSR

Card 4/4

CHUMBURIDZE, I.P., dotsent; BELOUSOV, M.M., kand.tekhn.nauk

Discussion of I.A. Syromiatnikov's article "Principal trends in carrying out complete electrification." Elektrichestvo no.2:87-90 F '61.
(MIRA 14:3)

1. Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov Gruzinskoy SSR.
(Electrification)
(Syromiatnikov, I.A.)

BELOUSOV, M.M., kand.tekhn.nauk (Moskva)

Concerning the determination of the economic efficiency of hydroelectric power stations. Elektrichestvo no.2:86-88 F '62. (MIRA 15:2)

(Hydroelectric power stations)

BELOUSOV, M., kand.tekhn.nauk, starshiy nauchnyy sotrudnik

Artificially complicated problem. NTO 4 no.1:36-38 Ja '62.
(MIRA 15:1)

1. Vsesoyuznyy elektrotekhnicheskiy institut.
(Electric power plants)

PERMYAKOV, V.A., kand. tekhn. nauk; BELOUSOV, M.P., inzh.

Shortcomings of a useful textbook. Teploenergetika 10 no.8:
93-94 Ag '63. (MIRA 16:8)

(Heat exchangers)

BELOUSOV, M . S.

N/F
752.21
.B4

BUKHGALTERSKIY UCHET I KALKULYATSIYA V PROMYSHLENNOSTI PRODOVOL'STVENNYKH TOVAROV [COST ACCOUNTING AND BOOKKEEPING IN FOODSTUFF INDUSTRIES], BY [7] M. S. BELOUSOV [i.e.] D. A. TITOV. MOSKVA, PISHCHEPROMIZDAT, 1957

323 p. TABLES.

BELOUSOV, M.S.; POKLADA, I.I., prof.; BEZRUKIKH, P.S.; BARNGOL'TS, S.B.; ZLOBINA, P.P.; GRIGOR'YEVA, S.T.; MEDVEDEVA, R., red.; TELEGINA, T., tekhn. red.

[A course in accounting] Kurs bukhgalterskogo ucheta. 2., perer. i dop. izd. Moskva, Gosfinizdat, 1963. 488 p. (MIRA 16:11)

(Accounting)

BELOUSOV, M.S., kand. ekon. nauk, dots.; VORONIN, M.G., kand. ekon. nauk; DUNDUKOV, G.S., kand. ekon. nauk, dots.; KAMYSHANOV, P.I., kand. ekon. nauk; KOLESOV, V.S.; KUPRIYENKO, A.N., kand. ekon. nauk; PEN'KOV, Ye.G., kand. ekon. nauk, dots.; SOLONEVICH, F.F. Prinimal uchastiye SMORODIN, M.B.; MUKHIN, N.A., retsenzent; FEDOTOV, G.N., retsenzent; STARCHAKOVA, I.I., red.; KIRAKOZOVA, N.Sh., red.; MEIRISH, D.M., tekhn. red.

[Accounting in commerce] Bukhgalterskii uchet v torgovle. [By] M.S. Belousov i dr. Moskva, Gostorgizdat, 1963. 528 p. (MIRA 17:1)

1. Prepodavateli kafedry bukhgalterskogo ucheta Moskovskogo instituta narodnogo khozyaystva im. G.V.Plekhanova (for Belousov, Voronin, Dundukov, Kamyshanov, Kolesov, Kupriyenko, Pen'kov, Solonevich). 2. Glavnyy bukhgalter Soyuza potrebitel'skikh obshchestv RSFSR (for Fedotov).

ILLEGIBLE

BELOUSOV, M. Ya.

USSR/Tech Schools 5705.0200 May 1947

"Measures for the Future Development of Institutes and Technical Schools" 1 p

"Zh-d Transport" No 5

Describes political educational work of railroad transport institutes as insipid. M. Ya. Belousov, Chief of Central Administration of Educational Institutions, ordered to hold conference on methods in summer for all directors of institutes and chairmen of departments to eliminate defects. 4,500 students to be accepted in 1947/1948 academic year. Distribution of prospective students in thirteen railroad

18C101

USSR/Tech Schools 5705.0200 (Contd) May 1947

transport institutes. All railroad technical schools affiliated with railroads. Criticizes poor use made of graduates. 11,000 students to be accepted in 81 technical schools in 1947/1948 academic year.

18C101

180101

BELOUSOV, M. YA.

Teplovoi raschet paroperegrevatelia parovoza. [Thermal computation for steam superheater of a locomotive]. Moskva, Gos. transp. zhel-dor. izd-vo, 1946. 72 p. diagrs.
DLC: TJ693.B4 1946

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS, A BIBLIOGRAPHY, Library of Congress Reference Department, Washington, 1952, Unclassified.

L 45827-66 EWT(1) IJP(c)

ACC NR: AR6015977 SOURCE CODE: UR/0275/65/000/011/V010/V010

AUTHOR: Belousov, N. A.; Bondarenko, V. A.; Volodin, V. P.; Shlenskiy, Ye. M.

TITLE: Methods for improving the operational characteristics of ultrasonic generators

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 11V66

REF SOURCE: Tr. N.-i. tekhnol. in-t, vyp. 8, 1964, 23-28

TOPIC TAGS: ultrasonic vibration emitter, AFC, semiconductor diode

ABSTRACT: The paper is a report on modernization of ultrasonic generators in the UZG series. The efficiency of these generators is improved by using semiconductor diodes in plate rectifier circuits. These diodes have a longer service life than gas rectifiers. Losses in the rf circuits may be considerably reduced by using transposed windings and ferrite cores. The most promising method for power regulation uses a power transformer with a stepwise voltage control. The use of this type of transformer in a system with continuous regulation in the grid circuit gives a continuous power control within the necessary limits without any considerable change in the efficiency of the UZG generator. A report is given on development of a generator circuit with AFC tuned to the mechanical resonance frequency of the transducer. UZG systems are considered from the standpoint of improving their operational characteristics. 4 illustrations. A. Ch. [Translation of abstract]

SUB CODE: 13, 09

Card 1/1

UDC: 534.232-8

Belousov, N.A.

KITAYGORODSKIY, Yu.I., inzh.; KOGAN, M.G., kand. tekhn. nauk; BELOUSOV, N.A., inzh.

Using high-frequency electron-tube oscillators in exciting powerful ultrasonic oscillations. Vest. mash. 38 no.3:33-34 Mr '58.
(Oscillators, Electron-tube) (Ultrasonic waves) (MIRA 11:2)

BELOUSOV, N. A., (Veterinary Surgeon, Veterinary Bacteriological Laboratory, Tashkent oblast')

The disease with sinusitis manifestatious in ducklings

Veterinariya vol. 38, no. 9, September 1961, pp. 60.

S/194/62/000/005/078/157
D222/D309

AUTHORS: Belousov, N.A., and Tuzlukova, V.A.

TITLE: Production technology and methods of measuring the basic parameters of magnetostriction transducers series ПМС (PMS)

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 5, 1962, abstract 5-5-34 m (V sb. Primeneniye ul'trazvuka v tekhnol. mashinostr. no. 2, M., 1960, 25 - 28)

TEXT: A detailed description is given of the production technology and of the methods of determining the parameters of permendur transducers. The technology of annealing packages in a hydrogen atmosphere, or in a closed sand bath, and of the oxidation and soldering to the concentrator are described. A calorimetric method of measuring the efficiency of the transducer and the input power are given. The transducer frequency is determined by the method of Lissajous figures. [Abstractor's note: Complete translation].

Card 1/1

AKHMEDBABAYEV, M.Kh.; ARIFDZHANOV, K.A.; BELOUSOV, N.A.; BELYAKOV, S.P.; ZOTOV, V.G.; ISAYEVA, Z.D.; MAKHMUDOV, I.A.; ISHCHENKO, F.S.; KRASIL'NIKOV, Ya.A.; NIKOL'SKIY, I.P.; NETSETSKIY, A.M.; PERGAT, F.F.; PAVLOVSKAYA, M.D.; SAMSONOV, L.S.; POLIZHAYEV, A.I.; SMIRNOV, F.Ye.; SABININ, M.N.; SHUTYAYEV, N.A.; CHIZHIK, V.I.; KARPENKO, P.M.; IMEROV, A.I.

Mikhail Aleksandrovich Nenetskii; obituary. Veterinariia 37 no.10:94 O '60. (MIRA 15:4)
(Nenetskii, Mikhail Aleksandrovich, 1899-1960)

HELOUSOV, N.A., veter. vrach

Duckling disease with symptoms of sinusitis. Veterinariia 38 no.9:60-61 S '61. (MIRA 16:8)

1. Tashkentskaya oblastnaya veterinarno-bakteriologicheskaya laboratoriya.

L 00842-67 EWT(1) IJP(c)

ACC NR: AR6014093 SOURCE CODE: UR/0272/65/000/011/0072/0072

AUTHORS: Belousov, N. A.; Bondarenko, V. A.; Volodin, V. P.; Shlenskiy, Ye. M.

TITLE: Methods of increasing the operational characteristics of ultrasonic generators

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika, Abs. 11.32.608

REF SOURCE: Tr. N.-i. tekhnol. in-t, vyp. 8, 1964, 23-28

TOPIC TAGS: ultrasonic frequency, high frequency, electric transformer, ferrite, semiconductor rectifier, electron tube grid, ultrasonic generator/ UZG ultrasonic generator

ABSTRACT: A modernization of the ultrasonic vacuum-tube generators of the UZG series is reported. The efficiency of the ultrasonic generators is increased by using semiconductor diodes in the circuits of the plate rectifiers. Semiconductor diodes have a longer life than ion rectifiers. Losses in the high-frequency circuits can be considerably reduced by using transformer winding and ferrite cores. For the regulation of power, the most promising is a regulation circuit with the use of a power transformer with step regulation of voltage. The use of such a transformer in conjunction with smooth regulation in the grid circuit permits smooth regulation of power within the required limits without a substantial change in the efficiency of the ultrasonic generators. Circuits are given which permit reduction of plate

 UDC: 389:534-8.232.004.12

L 00842-67
ACC NR: AR6014093

losses and a corresponding increase in efficiency. The development of a circuit with automatic tuning of the frequency of the generator to the frequency of mechanical resonance of the converter is reported. Ultrasonic-generator systems are examined with the aim of improving their operational characteristics. 4 illustrations.
[Translation of abstract]

SUB CODE: 09, 14

Card 2/2 pb

L 04218-67 EWT(1) IJP(c)
ACC NR: AR6015877 (N) SOURCE CODE: UR/0275/65/000/012/V009/V010

AUTHOR: Belousov, N. A.; Bondarenko, V. A.; Shlenskiy, Ye. M. 34 B

TITLE: Ultrasonic generators of the UZG series 25 26

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 12V62

REF SOURCE: Tr. N.-i. tekhnol. in-t, vyp. 8, ch. 1, 1964, 5-15

TOPIC TAGS: ultrasonic emitter, ultrasonic equipment, electric generator unit

ABSTRACT: Powerful UZ generators 10 produced at the present time are described (of types UZG-10M, UZG-6, and UZG-2.5). After modernization, they were renamed UZG-10U, UZG-6M, and UZG-2.5M. In the development and modernization of generators of the UZG series, a number of common solutions have been used: application of circuits with self-excitation, power supply from anode circuits, from regulated rectifiers, stabilization of the power supply of the heating circuits, and application of regulated field rectifiers. Technical data of six generators of the UZG series are given, all operating in the range from 18 to 22 kc, and also simplified electrical circuits of the modernized generators. As a result of modernization, an increase in capacity produced and in the efficiency of the generators has been achieved. [Translation of abstract] S. B.

SUB CODE: 09, 13
Card 1/1 pc

UDC: 534.232-8

LEBEDEV, Vladimir Vasil'yevich; BELOUSOV, N.F., inzh., nauchn. red.

[Hydrological and water-management calculations for designing water-supply structures] Gidrologicheskie i vodokhoziaistvennye raschety dlia proektirovaniia sooruzhenii vodosnabzheniia. Leningrad, Stroiizdat, 1965. 395 p. (MIRA 18:12)

BELOUSOV, N. G.

Belousov, N. G. - "Salvage department in the forest-economy unit," Les Khoz-vo, 1948, No. 3, p. 33-34

SO: U-3600, 10 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

KOLBNEV, A. F. and BELOUSOV, N. I.

"Increasing the Quality of Castings from Non-ferrous Metals."

report presented at the Leningrad Regional Conference on Progressive Foundry Practice Leningrad, 8-12 Dec 1959.

BELOUSOV, N.N., gornyy inshener

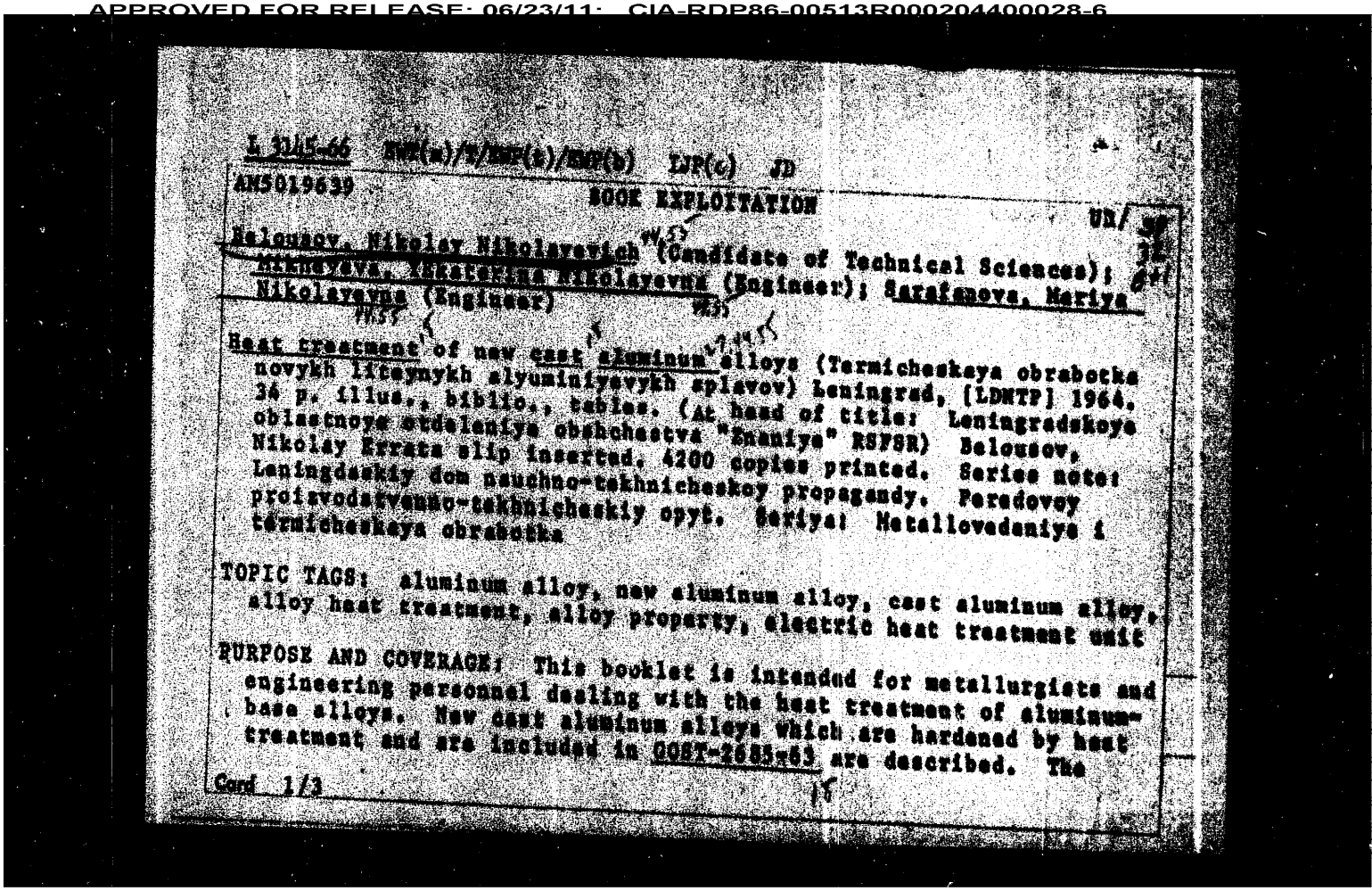
Auger mining system can be used for mining Ukrainian lignite. Ugol' Ukr. 4 no.5:17 My '60.
(MIRA 13:8)

1. Shakhta No.4-bis "Yurkovskaya".
(Dnieper Basin--Lignite)
(Boring machinery)

BELOUSOV, N.N.; ZAKHAROV, Yu.S.

Interference rejection of a signal detector operating on a zero count principle. Izv.vys.ucheb.zav.; radiotekh. 8 no.5:530-537 S-O '65. (MIRA 18:12)

1. Submitted October 6, 1964.



L 3145-66 EWA(m)/T/EWP(t)/ETI IJP(c) JD

AM5019639 BOOK EXPLOITATION UR/

Belousov, Nikolay Nikolayevich (Candidate of Technical Sciences); Mikheyeva, Yekaterina Nikolayevna (Engineer); Sarafanova, Mariya Nikolayevna (Engineer)

Heat treatment of new cast aluminum alloys (Termicheskaya obrabotka novykh liteynykh alyuminiyevykh splavov) Leningrad, [LDNTP] 1964. 34 p. illus., bibliog., tables. (At head of title: Leningradskoye oblastnoye otdeleniya obshchestva "Znaniye" RSFSR) Belousov, Nikolay Errata slip inserted. 4200 copies printed. Series note: Leningradskiy dom nauchno-tekhnicheskoy propagandy. Peredovoy proizvodstvenno-tekhnicheskiy opyt. Seriya: Metallovedeniye i termicheskaya obrabotka

TOPIC TAGS: aluminum alloy, new aluminum alloy, cast aluminum alloy, alloy heat treatment, alloy property, electric heat treatment unit

PURPOSE AND COVERAGE: This booklet is intended for metallurgists and engineering personnel dealing with the heat treatment of aluminum-base alloys. New cast aluminum alloys which are hardened by heat treatment and are included in GOST-2685-63 are described. The

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L 31/5-66

AM5019639

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systems, phase diagrams, and chemical composition of these new heat-resistant and corrosion-resistant aluminum alloys are indicated, and methods of casting them are described. Optimal conditions of heat treatment applied to strengthen these alloys are dealt with in detail. Mechanical properties of new aluminum alloys strengthened by heat treatment are indicated, and electrical units used for alloy heat treatment are briefly described.

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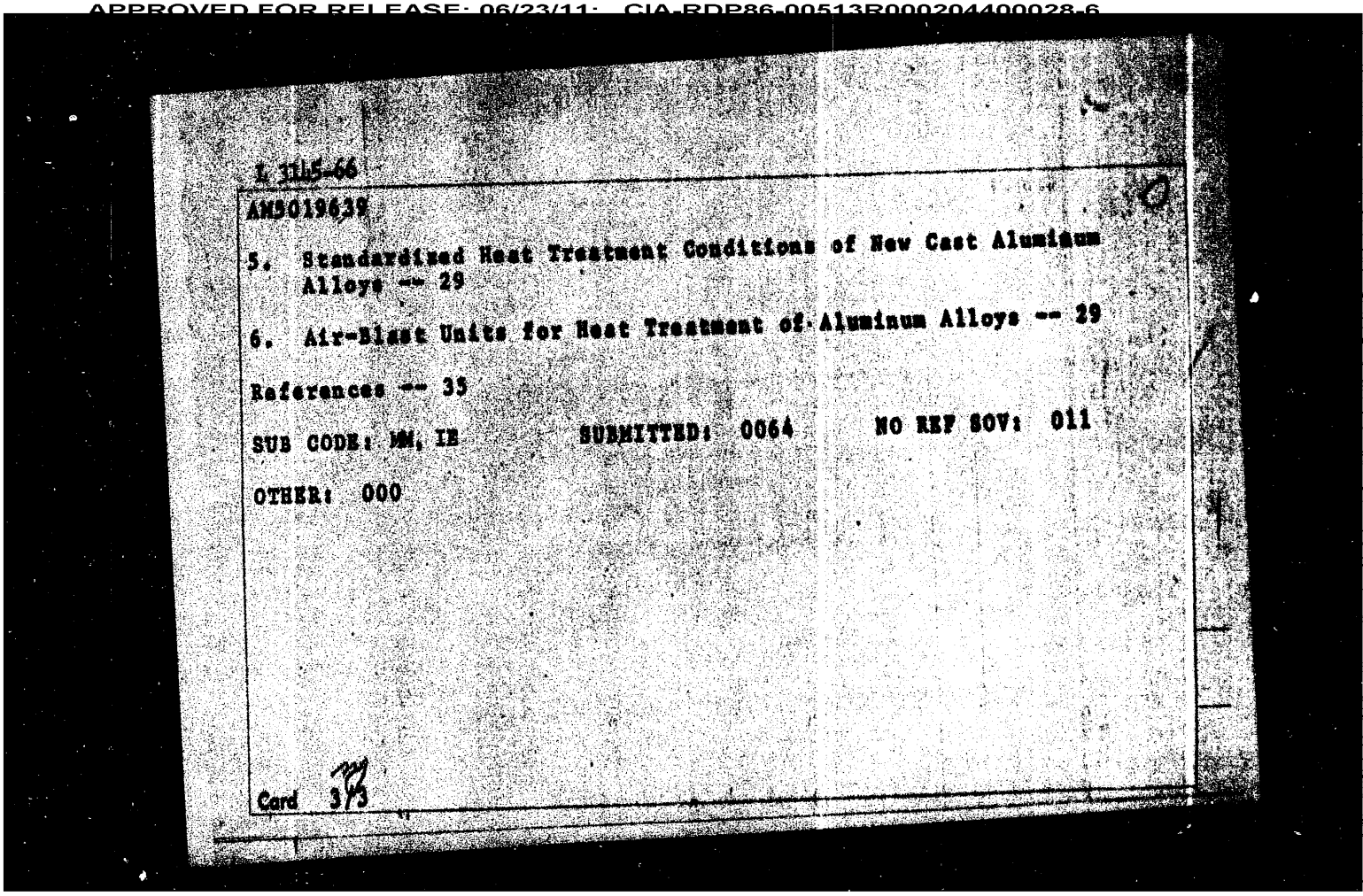

L 3145-66

AM5019639

5. Standardized Heat Treatment Conditions of New Cast Aluminum Alloys -- 29

6. Air-Blast Units for Heat Treatment of Aluminum Alloys -- 29

References -- 35

SUB CODE: MM, IE SUBMITTED: 0064 NO REF SOV: 011

OTHER: 000

Card 3/3

KOVVI, K.G.; PLYATSKIY, V.M.; TKACHEV, K.I., inshener, retsenzent; BELOUSOV, N.N., kandidat tekhnicheskikh nauk, redaktor.

[Preventing flaws in castings from non-ferrous alloys] Predupreshdenie porokov v otlivkakh is tsvetnykh splavov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1953. 122 p. (MLRA 7:4)
(Founding)

SOV/137-57-1-830

Translation from: Referativnyy zhurnal. Metallurgiya, 1957, Nr 1, p 107 (USSR)

AUTHORS: Dodonov, A. A., Nikitin, A. S., Belousov, N. N.

TITLE: Effect of Some Technological Factors on the Quality of Castings Produced by the Vacuum Suction Method (Vliyaniye nekotorykh tekhnologicheskikh faktorov na kachestvo otlivok, poluchayemykh metodom vakuumnogo vsasyvaniya)

PERIODICAL: V sb.: Novoye v teorii i praktike liteyn. proiz-va, Moscow-Leningrad, Mashgiz, 1956, pp 436-443

ABSTRACT: A description is given of the procedure for the automatization of the process of vacuum suction of liquid bronze (BrOF 10-1) into a water-cooled crystallizer in the production of hollow castings. The procedure permits the regulation of the wall thickness of the casting with a 0.1-sec [sic!] precision. It is necessary to keep the water temperature 20-30°C above room temperature. The authors studied the effect of the casting temperature on the quality of the coating of the inner surface of the crystallizer.

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A. L.

BELOUSOV, N. N.

Solidification of Metals : (Cont.) Trans. of 2nd Conf. on 1216
Theory of Foundry Processes, '56; Moscow, Mashgiz, 532pp

Card 4/8

SOV/137-57-1-1447

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 1, p 192 (USSR)

AUTHORS: Belousov, N. N., Yegorova, V. A.

TITLE: Improvement of the Properties of AL8 Alloy Castings (Povysheniye svoystv otlivok iz splava AL8)

PERIODICAL: V sb.: Novoye v teorii i praktike liteyn. proiz-va. Moscow-Leningrad, Mashgiz, 1956, pp 177-192

ABSTRACT: The mechanical properties of the AL8 Al-Mg alloy are not fully utilized under industrial conditions. According to the existing standards the permissible σ_b of specimens cut out of castings is to be reduced by 25% and the δ by 50% as compared to the properties of individually cast specimens. This reduction is motivated by the friable spots due to shrinkage, porosity, and oxide impurities in the massive portions of the castings. In order to establish optimal procedures for smelting and crystallization the authors carried out an investigation of the standard AL8 alloy on specimens 15, 30, and 60 mm thick, both as cast individually and as cut out of technical test samples. In the experiments the preheat temperature was changed from 680 to 1000°C, the casting temperature was 680°. The

Card 1/2

Improvement of the Properties of AL8 Alloy Castings

authors investigated the treatment of the liquid alloy with NH_4Cl, $ZnCl_2$, $MgCl_2$, and ZrK_2F_6, the effect of the addition of Be, Ca, Ti, and Zr, and that of smelting atmospheres on the oxidizability of the casting surface and the effect of crystallization under pressure on the mechanical properties of the castings The authors recommend the following measures for the maximum utilization of the advantages of the AL8 alloy and for obtaining high-grade castings: 1) No overheating of the alloy in the course of smelting >750 - 780°; 2) treatment of the liquid alloy with ZrK_2F_6 at 750°; 3) addition of 0.005% Be to the alloy, and 4) casting with crystallization under omnilateral pressure in autoclaves in the production of heavy castings.

A M

Card 2/2

BELOUSOV, N. N., and DODONOV, A. A.

"Vacuum Casting of Nonferrous Alloys," p. 95. in book Mechanization and Automatic Control of Founding Processes, Leningrad, 1957, 224pp.

BELOUSOV, N.N.

"Modern Methods of Producing Shapes Castings of Aluminum Alloys"

BELOUSOV, N. N. and YEGOROVA, V. A.
"Experience Gained in the Pressure Casting of Magnesium-Lithium Alloys."

Light Alloys. no. 1: Physical Metallurgy, Heat Treatment, Casting, and Forming; Principal Reports of the Conference, Moscow, Izd-vo AN SSSR, 1958, 497 P.
(2nd. All-U. Conf. on Light Alloys 1957)

AUTHOR: Gulyayev, B.B. SOV/24-58-4-37/39

TITLE: Conference on Crystallisation of Metals (Soveshchaniye po kristallizatsii metallov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 4, pp 153 - 155 (USSR)

ABSTRACT: This conference was held at the Institut mashinovedeniya AN SSSR (Institute of Mechanical Engineering of the Ac.Sc. USSR) on June 28-31, 1958. About 400 people participated and the participants included specialists in the fields of foundry, metallurgy, crystallography, physics, welding, heat, physical chemistry, mathematical physics and other related subjects. In addition to Soviet participants, foreign visitors included Professor D. Czikl (East Germany) and M.I. Chvorinov (Czechoslovakia). This conference on crystallisation of metals was the fourth conference relating to the general problem of the theory of foundry processes.

Crystallisation of Non-ferrous Metals. N.N. Belousov and I.A. Bodonov - in their paper "Investigation of the Crystallisation and the Properties of Non-ferrous Metals Under Conditions of Applying Pressure", presented results of experiments on producing castings which crystallise under pressure from all sides and piston pressure within a wide range of specific loads. The results of the investigation provide material for improving existing methods of applying pressure to influence the crystallisation of alloys. The influence of the conditions of crystallisation on the casting and mechanical properties of aluminium alloys, at normal and at elevated temperatures, were discussed in the papers of I.F. Kolobnev and A.Ye. Mamenov. The results of investigations of the conditions of crystallisation of aluminium alloys during continuous casting were presented in the paper of Ye.B. Zakharov. N.L. Pokrovskiy and D.Ye. Oyseyenko

Card8/10 dealt with the features of crystallisation of various non-ferrous alloys and the physico-chemical phenomena accompanying this process.

Crystallisation of Metals in the Welding Bath. The following papers were read: B.A. Movchan - "Investigation of the Features of the Microscopic Chemical Non-uniformity in Alloys"; G.L. Petrov - "Crystallisation and Chemical Non-uniformity in Weld Joints"; M.Kh. Shorshorov and V.S. Sedykh - "Influence of Non-uniformities of Crystallisation in the Weld Bath on the Formation of Hot Cracks".

Crystallisation of Metals in an Ultrasonics Field. The following papers were read: [illegible] Member of the Ac.Sc. Belorussian SSR N.N. Sirota, Ye.L. Lekhtsed and E.M. Smolyarenko - "Crystallisation of Metals and Alloys in an Ultrasonics Field"; I.I. Teymin - "Influence of Elastic Oscillations on the Processes of Crystallisation and the technological properties of Alloys"; L.L. Silin and A.A. Yerokhin - "Effect of Ultrasonics on Crystallising Metal in the Weld Bath".

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SOV-128-58-7-14/29

AUTHORS: ~~Belousov, N.N.,~~ Candidate of Technical Sciences, and Dodonov, A.A., Engineer

TITLE: A Valuable Book for Foundrymen (Tsennoye posobiye dlya rabotnikov liteynykh tsekhov)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 7, pp 27-28 (USSR)

ABSTRACT: This is a review of a "Spravochnik liteyshchika" ("Foundry Manual") for aluminum and magnesium casting, by I.F. Kolobnev, V.V. Krymov, and A.P. Polyanskiy, edited by N.N. Rubtsov, Mashgiz, 1957.

1. Foundries--USSR 2. Magnesium--Casting 3. Aluminum--Casting

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PLYATSKIY, V.M.; BELOUSOV, N.N.

Modern achievements in die casting. [Izd.] LONITOMASH 45:112-126
'58. (MIRA 11:6)
(Die casting)

SOV/123-59-15-60469

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, p 223 (USSR)

AUTHOR: Belousov, N.N.

TITLE: Solidification of Nonferrous-Alloy Castings Under the Application of Pressure

PERIODICAL: V sb.: Zatverdevaniye metallov. Moscow. Mashgiz, 1958, No 45, pp 176 - 214

ABSTRACT: Results are given of an investigation of the structure, density and mechanical properties of alloy castings of the AL-8 and AL-9 grades, obtained by crystallization under close pressure; the data obtained are compared with sand mold castings. The crystallization method under close pressure in autoclaves was tested with positive results with the AL-8 grade alloy under industrial conditions. At a thickness of casting of 60 mm σ_b increases by 24%, δ by 6%. Structure, density and mechanical properties of Al-, Mg- and Cu-alloy castings produced by crystallizati[on] under piston pressure were investigated; the data obtained are compared with sand mold castings, and also with castings, produced by the centrifugal process and by the vacuum suction method. Tables are given of variations in the mechanical properties of copper alloys depending on

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Solidification of Nonferrous-Alloy Castings Under the Application of Pressure

the casting method; the results of mechanical tests and of the determination of porosity of specimens from bars 60 mm in diameter of the AL-8 grade alloy are stated, as well as the changes in antifriction properties of these alloys when subjected to dry friction and resistance to wear at lubricated friction, depending on the casting method. Results are also given of investigations into the kinetics of the solidification process of aluminum alloys under various conditions, with the aid of the radioactive isotope method and by plotting the cooling curves of individual zones of the bars during the solidification process. Pressure as a physical factor, affecting the kinetics of alloy crystallization, plays a decisive role in the structural formation of the casting. 24 figures, 28 references.

Z.M.L.

ASTAULOV, Vasiliy Sergeyevich, inzh.; BELOUSOV, N.N., kand.tekhn.nauk, red.; KUBNEVA, M.M., tekhn.red.

[New, commercial frequency, induction crucibles for melting magnesium alloys] Novye induktsionnye tigel'nye pechi promyshlennoi chastoty dlia plavki magnievykh splavov. Pod red. N.N. Belousova. Leningrad, 1959. 17 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Liteinoe proizvodstvo, vyp.8) (MIRA 13:3)

(Magnesium founding) (Crucibles)

BELOUSOV, N.N.

28(1);25(1) PHASE I BOOK EXPLOITATION SOV/2831

Mekhanizatsiya i avtomatizatsiya trudoyemkikh protsessov v liteynom proizvodstve (Mechanization and Automation of Labor-consuming Processes in Foundry Practice) Moscow, Mashgiz, 1959. 226 p. Errata slip inserted. 4,000 copies printed.

Reviewer: K. N. Skobnikov, Candidate of Technical Sciences; Ed. (Title page): G. I. Kobylyanskiy (Deceased); Ed. (Inside book): A. N. Sokolov, Candidate of Technical Sciences; Tech. Ed.: O. V. Speranskaya; Managing Ed. for Literature on the Technology of Machinery Manufacture (Leningrad Division, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: The book is intended for technical personnel in foundries and engineers engaged in the mechanization and automation of industrial processes. It may also be used by students of institutions of higher technical education.

COVERAGE: The book deals with recent achievements in the mechanization and automation of time-and labor-consuming operations in foundries. Specific instances of mechanization and automation of foundry processes are described. The material presented in this book is divided into six parts, dealing with the following subjects: molding materials, mold and coremaking, casting, shakeout of molds, finishing of castings, and special casting methods. Each part consists of a number of technical papers presented by several authors. The application of automation ranges from the preparation of molds and cores to the mechanization and streamlining of specialized casting methods, such as investment casting and the use of shell molds. There are numerous diagrams showing automatized and mechanized installations in foundries. Most of the material is based on experiments and work done at the "Krasnyy Aksay" Plant. Some of the methods described appear to be in the experimental stage at that plant. The technical papers published in this book were originally presented at a technical conference of the Soviet machine industry in October 1957. No personalities are mentioned.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204400028-6

Belousov, N.N.

AUTHOR: None given

SOV/180-59-4-47/48

TITLE: A Conference on the Accuracy of Machine Building Castings

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 4, pp 255-256 (USSR)

ABSTRACT: A conference on the above subject took place in the Institute of Machine Building of the Academy of Sciences of the USSR on 22-24th April 1959. About 200 representatives of scientific-research institutes, laboratories, universities and largest works from 34 towns participated in the conference. The following papers were read: B.B.G'ulyayev "The present state of studies of the accuracy of castings", F.N.Aksenov "Tasks of investigations of the dependence of the accuracy of castings on technological factors"; N.F.Berg "Methods of analytical evaluation of dimensions of castings", Yu.A.Vorob'yev "Theoretical and experimental investigations of the accuracy of castings"; I.F.Yegorenkov - "The system of allowances for mechanical working of castings"; Ye.G.Kopanevich "Methods for the determination of tolerances for dimensions of cast parts"; S.A.Kozerskiy "Tolerances for non-ferrous castings produced by various methods of casting"; G.N.Nikol'skiy "Methods of controlling the cleanliness of the surfaces of castings"; I.S.Konstantinov "The influence of stresses formed during casting on the accuracy of castings"; I.Ye.[illegible] "The process of packing moulds as a factor determining the accuracy of castings"; S.S.[illegible] and [illegible] "Sources of errors in the dimensions of castings caused by specific features of operation of the pattern-mould boxes equipment"; A.N.[illegible] "Typical deformations of casting moulds"; [illegible] "Conditions of making accurate castings in [illegible]"; V.F.Ivanov "The influence of the chemical composition of iron on the accuracy of dimensions of castings"; S.N.Fomchenko and [illegible] "Improvement in the accuracy of castings made in [illegible] moulds"; V.V.[illegible] "Experience in increasing the cleanliness and accuracy of [illegible]"; I.I.Zoelsk[illegible] "On the [illegible] of castings made by the lost wax method"; I.I.[illegible] "An investigation of the accuracy and surface [illegible] of castings made under pressure and by the lost wax method"; [illegible] B.B.Gulyayev "The formation of the contour [illegible] during casting under pressure"; N.I.[illegible] and N.N.Belousov "An improvement in the surface [illegible] of castings made under pressure by forming a [illegible] the pressure moulds". It was established that studies on the subject of the accuracy of castings are developing too slowly mainly due to lack of co-ordination in the research work and insufficient numbers of specialists in the field of mathematics, [illegible] in order to develop methods for [illegible] accuracy, productivity [illegible] the conference recommended [illegible] [illegible]

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Card 2/3

PHASE I BOOK EXPLOITATION SOV/4343

Soveshchaniye po teorii liteynykh protsessov, 3d

Tsentrobezhnyye protsessy v metallakh; trudy soveshchaniya (Shrinkage Processes in Metals, Transactions of the Third Conference on the Theory of Casting Processes) Moscow, AN SSSR, 1960. 281 p. Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: B.B. Gulyayev, Doctor of Technical Sciences, Professor; Ed. of Publishing House: V.S. Rzheznikov; Tech. Ed.: T.V. Polyakova.

PURPOSE: This collection of articles is intended for scientific workers, engineers technicians of scientific research institutes and industrial plants, and for faculty members of schools of higher education.

COVERAGE: The collection contains technical papers presented at the Third Conference on the Theory of Casting Processes, organized by Liteynaya sektsiya Komissii po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Casting Section of the Commission for Machine-Building Technology of the Institute of Science of Machines, Academy of Sciences USSR) and by Institut metallurgii imeni Baykova AN SSSR (Institute of Metallurgy imeni A.A. Baykov, Academy of Sciences USSR). The most serious defects in castings, ingots, and welds as a result of metal shrinkage are reviewed. Factors contributing to the formation of shrinkage cavities, porosity, cracks, fissures, distortion, and internal stresses are analyzed along with measures taken to prevent and remedy them. The hydrodynamics of molten metals and the process of solidification of metals are discussed. Also presented are resolutions adopted at the Conference with regard to the problem of shrinkage in metals. No personalities are mentioned. Most papers are accompanied by bibliographic references, the majority of which are Soviet.

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BELOUSOV, N.N.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204400028-6

PHASE I BOOK EXPLOITATION SOV/3344

Soveshchaniye po teorii liteynykh protsessov, 4th

Kristallizatsiya metallov; trudy soveshchaniya (Crystallization of Metals; Transactions of the Fourth Conference on the Theory of Casting Processes) Moscow, izd-vo AN SSSR, 1960. 325 p. 3,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: B. B. Gulyayev, Doctor of Technical Sciences, Professor; Ed. of Publishing House: V. S. Rzhanitsyn; Tech. Ed.: S. G. Tikhomirova.

PURPOSE: This book is intended for metallurgists and scientific workers. It may also be useful to technical personnel at foundries.

COVERAGE: The book contains the transactions of the Fourth Conference (1958) on the Theory of Casting Processes. [The previous 3 conferences dealt with hydrodynamics of molten metals (1955), solidification of metals (1956), and shrinkage processes in castings (1957)]. General problems in the crystallization of metals, including the crystallization of constructional steels, alloy steels with special properties, cast iron, and of nonferrous alloys, are discussed. Recognition is given to D. K. Chernov and N. T. Gudtsov and their students, B. B. Gulyayev and A. G. Spasskiy, for their contributions to the understanding of the basic problems involved in the theory of crystallization of ferrous and nonferrous metals and alloys. Academician A. V. Shubnikov is also mentioned in connection with his work on the planning of research on crystal formation. References accompany several of the articles.

Belousov, N. N.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204400028-6

Belousov, N.N.

PHASE I BOOK EXPLOITATION SOV/3948

Akademiya nauk SSSR. Institut mashinovedeniya

Treniye i iznos v mashinakh; sbornik XIV (Friction and Wear in Machinery; Collection of Articles, no. 14) Moscow, Izd-vo AN SSSR, 1960. 333 p. Errata slip inserted. 3,000 copies printed.

Resp. Ed.: M. M. Khrushchov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: V. A. Giryayeva; Tech. Ed.: O. A. Astaf'yeva; Editorial Board: Ye. M. Gut'yar, Doctor of Technical Sciences, Professor; A. K. D'yachkov, Doctor of Technical Sciences, Professor; I. V. Kragel'skiy, Doctor of Technical Sciences, Professor; A. D. Kuritsyna, Candidate of Technical Sciences; L. Yu. Pruzhanskiy, Candidate of Technical Sciences; and M. M. Khrushchov, Doctor of Technical Sciences, Professor.

PURPOSE: The book is intended for scientific research workers and designers in the machine industry.

COVERAGE: The recent works of Soviet scientists on the subject of friction and wear in machinery are presented. Problems discussed include abrasive wear, the real area of contact surface, wear resistance and antifriction properties of some bronze and brass materials, the effect of hot jets of gases on surface layers of steel, and seizure and movements of journals in bearings. Brief biographical sketches and bibliographies of the works of Ye. N. Shvetsova, V. F. Lorents, and L. V. Yelin are presented. Bibliographies on friction, wear, and lubrication for 1956 and 1957 compiled by Ye. O. Vil'dt are also presented. References accompany several of the articles.

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S/577/60/000/000/001/006
E021/E435

18.1210 2408

AUTHOR: Belousov, N.N., Candidate of Technical Sciences

TITLE: Aluminium magnesium alloys for casting

SOURCE: Vsesoyuznoye nauchno-tekhnicheskoye soveshchaniye po tekhnologii fasonnogo lit'ya iz splavov tsvetnykh metallov. Moscow. 1958. Tekhnologiya fasonnogo lit'ya iz splavov; trudy soveshchaniya. Moscow, Mashgiz, 1960. 17-30

TEXT: Silumin alloys are normally used for pressure casting. These alloys, although possessing good castability, have insufficient strength and unsatisfactory machinability. An investigation of the possibility of pressure casting alloys on an aluminium-magnesium base was undertaken. The highest strength was obtained from alloys containing 6 to 8% magnesium. The tensile strength of these alloys reached 24 to 25 kg/mm^2 decreasing with further increase in magnesium content. Similar results were obtained with pressure cast samples of 3 mm thickness except that the tensile strengths were higher by about 2 to 3 kg/mm^2. Further tests were carried out on alloys based on aluminium with 6 to 8% magnesium. Iron and silicon had little effect on the

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tensile strength but 0.5% Si + 0.5% Fe reduced the elongation from 9 to 5%. Further increases in silicon and iron content produced no further decrease in the elongation. A figure of 5% is considered satisfactory. Additions of 0.2 to 1% Mn, 0.03 to 0.3% Ti and 0.01 to 0.1% Be had no marked effect on the mechanical properties but a small amount of Mn and Be increased the corrosion resistance of the alloy. Thus a new alloy AMг7Л (AMg7L) is proposed with the following composition: 6 to 8% Mg, 0.5 to 1% Si, 0.25 to 0.6% Mn, up to 0.9% Fe and up to 0.01% Be. Investigations of the new alloy for sand-casting and gravity die-casting were also carried out. The best combination of mechanical properties and corrosion resistance was obtained with the following composition: 6 to 7% Mg, 0.05 to 0.1% Be, 0.05 to 0.15% Ti and 0.05 to 0.2% Zr. The new alloys were also proved under industrial conditions. Investigations of possible new heat-treatable alloys based on Al - 11% Mg were also carried out. Addition of 0.2 to 0.4% Zr refined the grain size of the alloys and improved the mechanical properties; addition of 0.25% Ti had the same effect. The highest corrosion resistance was shown by alloys containing 0.1 to 0.3% Ti. An addition of 0.5% Be had no influence on the

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mechanical properties but with greater concentrations there was a decrease in plasticity. The alloy chosen for production tests contained 9.5 to 11.5% Mg, 0.05 to 0.2% Be, 0.05 to 0.2% Zr. Results were satisfactory. The following engineers took part in the tests: A.A.Ivankin, K.G.Kovvi, N.V.Yeremeyevskiy, I.A.Sitnikova, V.A.Yegorova, A.A.Dodonov, Ye.N.Mikheyeva, M.N.Sarafanova, Z.G.Mednikov and V.S.Kolesnikova. There are 4 figures and 16 tables.

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S/711/60/014/000/005/013
D262/D301

18.1770
11.9000

AUTHORS: Kolesnikova, V.S., and Belousov, N.N.

TITLE: Investigating anti-frictional properties of certain bronzes and brasses

SOURCE: Akademiya nauk SSSR. Institut mashinovedeniya. Treniye i iznos v mashinakh, v. 14, 1960, 100 - 170

TEXT: The purpose of the investigations was to compare anti-frictional properties of bronzes and brasses under various conditions of friction, in order to select the most suitable substitutes for high-tin bronzes, and to investigate the effects of crystallization conditions on the anti-frictional properties of copper alloys. Sixteen different cast bronzes and brasses were tested on Amsler's machine and the machine MT-2. The tests were made to investigate the following: 1) The effect of sliding on working abilities of bronzes and brasses in friction; 2) the effect of heating temperature on anti-frictional properties; 3) the effect of hardness of components on wear qualities; 4) the effect of lubrication on wear qualities;

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5) the results of applying antimony-nickel bronzes; 6) the effect of crystallization conditions on anti-frictional properties; 7) the effect of metal structure on wear qualities in friction with lubrication. The results were recorded in form of tables and graphs and the following general conclusions reached: Heating temperature which depends on sliding speed, is the main factor determining the behavior of alloys during friction. Anti-frictional properties are determined by chemical composition and micro-structure, and also depend on conditions of lubrication. The ability of alloys to increase their resistance under plastic deformation and to form oxides on friction surfaces increases their wear qualities. The antimony-nickel bronze Бр.СуН 7-2 (Br.SuN7-2) can be used in place of high-tin bronzes. The structure of bronzes and brasses, determined by crystallization conditions of casting, has a considerable effect on anti-frictional properties. The best anti-frictional properties were obtained for castings made in sand moulds, and for certain alloys made by vacuum suction into a water-cooled crystallizer. There are 23 figures, 14 tables and 12 references: 10 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: F.P. Bowden, J.N. Gregory and D. Tabor, Lubrica-

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tion of metal surfaces by fatty acids, Nature, 156, no. 3952, 97, 1945; F.P. Bowden and D. Tabor, The friction and lubrication of solids, London, 1950.

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X

80889

18.1210

S/126/60/009/06/016/025
E073/E335

AUTHORS: Varich, N.I., Belousov, N.N. and Shcherbakov, G.I.

TITLE: Influence of Plastic Deformation on the Structure and Properties of an Al-Mg Alloy

PERIODICAL: Fizika metallov i metallovdeniye, 1960, Vol 9, Nr 6, pp 909 - 917 (USSR)

ABSTRACT: The aim of the work described in this paper was to investigate the influence of plastic deformation of cast and hot-pressed specimens on the changes in the mechanical properties and in the sub-microstructure of a new alloy AL8-U containing 11.5% Mg, 0.14% Be, 0.1% Ti, 0.1% Zr, rest Grade AV000 aluminium. Ingots of this alloy were produced in a 120 mm dia metal mould, applying by means of a piston a specific pressure of 1300 kg/cm^2 during the process of crystallisation. The thus-produced ingots were heat-treated (soaked at 435 °C for 20 hours and subsequently quenched in hot water). One batch of the specimens were investigated in the cast and heat-treated state. A part of another batch was subjected to cold-working to the extent of 25, 50 and 75%; a second part of this batch was subjected to hot pressing at 420 °C

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and some of these specimens of the pressed and heat-treated alloy were also subjected to subsequent cold-working to the extent of 25 and 50%. The results of testing the mechanical properties of specimens after various types of deformation are given in Table 1. The average results of the mechanical tests (at -60, +20, +150 and +200 °C) of hot-pressed specimens are entered in Table 2. Results of hardness tests of type-II stresses of the dependence of the block dimensions on the degree of deformation and other results are entered in graphs. The results of extensive tests have shown that this new Al-Mg alloy containing 11% Mg and very small additions of Be, Zr and Ti is suitable for producing semis by hot pressing. Components from this new alloy can be manufactured directly from hot-pressed rods and also from cold-worked material. The alloy AL8-U was originally proposed by N.N. Belousov, A.A. Dodonov, V.A. Yegorov, A.A. Ivankin and Ye.N. Mikheyev.

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There are 9 figures, 3 tables and 4 references, 2 of which are German and 2 Soviet.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

SUBMITTED: October 10, 1959

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BELOUSOV, Nikolay Nikolayevich, kand. tekhn. nauk; KOLESNIKOVA, Vera Sergeyevna, kand. tekhn. nauk; PROZHOGIN, A.A., starshiy nauchnyy sotr., red.; FOMICHEV, A.G., red. izd-va; GVIRTS, V.L., tekhn. red.

[Saving scarce nonferrous alloys; survey] Ekonomiia defitsitnykh tsvetnykh splavov; obzor. Leningrad. Pt.1. 1961. 58 p. Pt.2. 1961. 52 p. (MIRA 14:7)

(Nonferrous alloys)

BELOUSOV, Nikolay Nikolayevich; LIPNITSKIY, A.M., red.; LEBEDEV, K.P., kand. tekhn. nauk, red.; KUREPINA, G.N., red. izd-va; BARDINA, A.A., tekhn. red.

[Melting and casting nonferrous metal alloys] Plavka i razlivka splavov tsvetnykh metallov. Pod obshchei red. A.M.Lipnitskogo. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1961. 77 p. (MIRA 14:12)

(Nonferrous metals—Founding)